

**Minutes of the 133rd meeting of the Genetic Engineering Appraisal Committee (GEAC)
held on 11.05.2017**

The 133rd Meeting of the Genetic Engineering Appraisal Committee (GEAC) was held on May 11, 2017 under the Chairpersonship of Dr. Amita Prasad, Additional Secretary and Chairperson, GEAC.

List of participants is enclosed at **Annexure-1**

Agenda Item No. 1 : Leave of absence

The Committee granted leave of absence to the following members

1. Dr. Sushil Gupta
2. Dr. O.P. Govila
3. Dr. S.S. Banga
4. Dr. V.V. Ramamurthy
5. Dr. P.M. Bhargava

Agenda Item No. 2 : Confirmation of Minutes of the 132nd GEAC meeting

The Committee confirmed and accepted the minutes of the 132nd GEAC meeting circulated to members on 02.05.2017

Agenda item No. 3 : Action taken report on the decisions taken in the 132nd GEAC Meeting

The Committee noted that all the action points as suggested in 132nd GEAC meeting were undertaken by the Secretariat

Agenda Item No. 4 : Information about the applications related to Additional location or Extension of validity period approved by the Chairperson, GEAC

The Committee noted that subsequent to the decisions taken in 125th GEAC meeting dated 11.12.2015 approval for additional location or extension of validity period without change in technical details can be accorded with the approval of Chairperson and accordingly, the following applications were approved by the Chairperson, GEAC and submitted for information of Committee

Item No. 4.1 Permission for inclusion of locations at Telangana, Madhya Pradesh, Uttar Pradesh, Bihar, Chhattisgarh and Delhi as additional locations to conduct Biosafety Research Level-I (BRL-I) trial with 2 transgenic Maize (*Zea mays* L.) hybrids containing *cry1F*, *cry1Ab* and *cp4epsps* genes (stacked events of TC1507 x MON 810 x NK 603 (DAS-01570-1 x MON-00810-6 x MON-00603-6) by M/s Pioneer Hi-Bred Pvt. Ltd

Item No. 4.2 Permission for inclusion of locations at Andhra Pradesh, Telangana, Madhya Pradesh, Uttar Pradesh, Bihar, Chhattisgarh and Delhi as additional locations to conduct two years of BRL-I trials of transgenic maize hybrids expressing stacked events TC1507 x MON810 during appropriate season(s) during the years 2017 and 2018 by M/s Pioneer Hi-Bred Pvt. Ltd

Agenda Item No. 5 : Applications related to Commercial/ Environmental Release

Item No. 5.1 Application for Environmental release of Transgenic Mustard Hybrid DMH-11 and Parental lines containing events *bn 3.6 and modbs 2.99* developed using *barnase, barstar and bar* genes by M/s. Centre for Genetic Manipulation of Crop Plants (CGMCP), University of Delhi.

The committee acknowledged the receipt of report submitted by the Sub-Committee constituted under the Chairmanship of Dr. Veluthambi for review of dossier and application submitted by CGMCP, University of Delhi for Environmental release of Transgenic Mustard (*Brassica juncea*) Hybrid DMH-II and use of parental lines containing events Varuna *bn 3.6* and EH-2 *modbs 2.99* for development of new generation hybrids and the report submitted by the Sub-Committee was examined in detail. GEAC recommended the proposal with certain terms and conditions for further approval by the Competent Authority.

Agenda Item No. 6 Applications related to Event Selection trials/Confined Field Trials (BRL I / BRL II/ Seed Production)

Agenda Item No. 6.1 Application submitted by M/s. Maharashtra Hybrid Seeds Co. Pvt. Ltd. Seeking permission to conduct event selection trial of salt tolerant transgenic wheat events namely MAH-31501 to MAH-31525 containing OsNHX1 gene under natural saline condition at ICAR-Central Soil Salinity Research Institute, Regional Research Station, Bharuch, Gujarat.

The Committee reviewed the application submitted by M/s. Maharashtra Hybrid Seeds Co. Pvt. Ltd. seeking permission for conduct of event selection trial of salt tolerant transgenic wheat events namely MAH-31501 to MAH-31525 containing OsNHX1 gene under natural saline condition at ICAR-Central Soil Salinity Research Institute, Regional Research Station, Bharuch, Gujarat and recommended the application.

Agenda Item No. 6.2 Application submitted by M/s Maharashtra Hybrid Seeds Co. Ltd. for event selection trial of transgenic cotton containing coat protein gene of Tobacco Streak Virus (TSV) for resistance to TSV.

The Committee reviewed the application submitted by M/s. Maharashtra Hybrid Seeds Co. Pvt. Ltd. seeking permission for conduct of event selection trial of transgenic cotton containing coat protein gene of Tobacco streak virus (TSV) for resistance to TSV and recommended the application. Committee suggested the applicant to furnish the below information also to RCGM and GEAC

- The applicant needs to provide information about the vector used for the co-transformation for selection of the transformants to generate marker free transgenic events
- The applicant needs to provide information whether TSV gene was isolated from Indian isolate? If so, which location?

- The applicant needs to provide clarification whether the protein is expressed in the plant with or without the virus challenge experiment.

Agenda Item No. 6.3 Application submitted by M/s Maharashtra Hybrid Seeds Co. Ltd. for permission to conduct of confined field trial to evaluate weed control efficacy of Roundup 41% SL (IPA salt) along with residue analysis and effect on succeeding crop, on, Glyphosate resistant roundup ready flex cotton hybrids containing *cp4epsps* gene

The Committee reviewed the application submitted by M/s. Maharashtra Hybrid Seeds Co. Pvt. Ltd. seeking permission for conduct of confined field trial to evaluate weed control efficacy of Roundup 41% SL (IPA salt) along with residue analysis and effect on succeeding crop, on, Glyphosate resistant roundup ready flex cotton hybrids containing *cp4epsps* gene.

The Committee noted that this experiment is part of statutory requirement of generating bio efficacy/ biosafety data as required by CIB&RC and since they were doing this experiment on transgenic cotton, approval is sought from GEAC. Accordingly, the Committee recommended the application.

Agenda Item No. 7 : Applications related to Import/ Export

Item No. 7.1 : Application for Import of Crude and Processed Oil derived from Dicamba Tolerant Soybean (Event MON 87708) from USA for consumption purpose in India by Ms. Monsanto Holdings Pvt. Ltd

The Committee reviewed the application submitted by Ms. Monsanto Holdings Pvt. Ltd and deferred the application as the applicant has provided test analysis report of only one sample against a requirement of 3 samples by GEAC.

Item No. 7.2 : Permission for import of Soybean Grain & Oil derived from Herbicide Tolerant Soybean (Event DAS-68416-4) for food & feed purpose by M/s Dow Agro Sciences India Pvt. Ltd

The Committee deferred the application submitted by M/s Dow Agro Sciences India Pvt. Ltd based on request of the applicant seeking a deferment for time being.

Item No. 7.3 : Permission for import of Soybean Grain & Oil derived from Herbicide Tolerant DAS-44406-6 Soybean for food & feed purpose by M/s Dow Agro Sciences India Pvt. Ltd

The Committee deferred the application submitted by M/s Dow Agro Sciences India Pvt. Ltd based on request of the applicant seeking a deferment for time being.

Agenda Item No. 8 : Additional Items

Item No. 8.1 Discussion on Minutes of the 1st Meeting of the Sub-Committee held on April 10, 2017 for Framing Guidelines and Standard Operating Procedures (SOPs) for Event Selection Trials

Committee reviewed the Minutes of the Meeting and appreciated the efforts of the Sub-Committee for coming up with several inputs for strengthening the monitoring mechanism for conduct of Event Selection Trials (ESTs).

The Committee suggested convening few other meetings of the Sub-Committee to seek feedback and suggestions from relevant other stakeholders and also to discuss on the issue of merging of BRL-1 and BRL-2 Field Trials as discussed during the 130th meeting of the GEAC held on 11.08.2016

The Committee suggested the Sub-Committee to submit its final recommendations/ report within next 3 months.

Item No. 8.2 Discussion on Minutes of the 1st Meeting of the Sub-Committee held on April 11, 2017 for Drafting Guidelines for Import of Distiller’s Dried Grains and Solubles (DDGS)

Committee reviewed the Minutes of the Meeting and appreciated the efforts of the Sub-Committee for coming up with several inputs for drafting guidelines for import of DDGS

The Committee suggested convening few other consultative meetings with relevant stakeholders like Soybean Oil Producers Association (SOPA), Poultry Association, Department of Dairying and Animal Husbandry, Food safety and Standards Authority of India (FSSAI) and any other experts/ agencies as felt appropriate to seek inputs.

The Committee suggested the Sub-Committee to submit its final recommendations/ report within next 3 months.

The meeting ended with a vote of thanks to the Chair.

LIST OF PARTICIPANTS

Annexure-1

S. No.	NAME & DESIGNATION
1.	Dr. Amita Prasad, Chairperson & Additional Secretary, Ministry of Environment, Forests & Climate Change, Jor Bagh, Aliganj, New Delhi.
2.	Dr K. Veluthambi, Co-Chairman, Professor (retd) & Head, School of Biotechnology, Madurai Kamraj University, Madurai
3.	Shri. Gyanesh Bharti, Vice Chairman, & Joint Secretary, Ministry of Environment, Forest & Climate Change, Jor Bagh, Aliganj, New Delhi.
4.	Ms. Madhumita Biswas, Member Secretary (GEAC) & Director, Ministry of Environment, Forests & Climate Change, Jor Bagh, Aliganj, New Delhi.
Members	
5.	Prof. C.R. Babu, Centre for Environmental Management of Degraded Ecosystems, School of Environmental Studies, University of Delhi, Delhi
6.	Dr. B. Sesikeran, Former Director, National Institute of Nutrition, Hyderabad
7.	Dr. S. K. Apte, Former Director, Bio-Medical Group, BARC, Mumbai.
8.	Dr. S. R. Rao, Advisor, Department of Biotechnology, C.G.O. Complex, New Delhi
9.	Dr. J.S. Sandhu, DDG (Crop Science), Indian Council of Agricultural Research, Krishi Bhawan, New Delhi.
10.	Shri D. S Mishra, Deputy Commissioner (QC) Department of Agriculture & Cooperation Ministry of Agriculture, Krishi Bhawan, New Delhi.
11.	Dr. Vijay Kumar, Scientist G, Head, Division of Basic Medical Sciences, Indian Council of Medical Research (ICMR) Ministry of Health and Family Welfare, Ramalingaswami Bhavan, Ansari Nagar, New Delhi
12.	Dr. Ramesh Sonti, Chief Scientist, CSIR, Centre for cellular & Molecular Biology (CSI-CCMB) Uppal Road, Hyderabad.
13.	Dr Vijendra Mishra, Associate Professor, National Institute of Food Technology, Entrepreneurship of Management (NIFTEM) Kundli, Sonapat, Haryana
14.	Dr. Renee M Borges, Professor, Centre for Ecological Sciences, Indian Institute of Science, Bangalore
15.	Dr. Ranjini Warriar, Former Advisor, Ministry of Environment, Forests & Climate Change, Jor Bagh, Aliganj, New Delhi.
Others	
16.	Dr. Murali Krishna, Scientist D, Ministry of Environment, Forest and Climate Change, Jor Bagh, Aliganj, New Delhi.
17.	Dr. P. Saranya, Scientist C, Ministry of Environment, Forest and Climate Change, Jor Bagh, Aliganj, New Delhi.
18.	Dr. Vanga Shiva Reddy, Chief Scientific Officer, Biosafety Support Unit (BSU), New Delhi